

REMARKS

The Office Action of January 8, 2008 was received and carefully reviewed. Reconsideration and withdrawal of the currently pending rejections are requested for the reasons advanced in detail below. By this amendment, claims 1, 5-7, 11-23, 25-31, 34, and 35 are amended for purposes of improved form and are unrelated to patentability, and claims 36-47 are added to further define the invention. Accordingly, claims 1-47 are currently pending in the instant application.

On page 2 of the Office Action, claims 8 and 21-24 are objected to under 37 C.F.R. § 1.75(c) as being “in improper form because a multiple dependent claim does not refer back in the alternative only.” Applicants respectfully disagree.

Applicants respectfully assert that each of claims 8 and 21-24, *as set forth in the Preliminary Amendment filed on April 12, 2006 or as set forth herein*, are of proper dependent form. Specifically, none of claims 8 and 21-24 are dependent upon a multiple dependent claim, and each of claims 8 and 21-24 further limit the subject matter of a previous claim. Accordingly, Applicants respectfully assert that each of claims 8 and 21-24 comply with the requirements set forth by 37 C.F.R. § 1.75(c). Applicants respectfully direct the Examiner’s attention to MPEP 608.01(n)(A), wherein there are demonstrated various examples of acceptable multiple dependent claim wording. Here, each of Applicants’ claims 8 and 21-24 mirror the acceptable exemplary claims.

Thus, Applicants respectfully assert that claims 8 and 21-24, *as set forth in the Preliminary Amendment filed on April 12, 2006 or as set forth herein*, clearly follow the acceptable multiple dependent claim wording examples demonstrated by MPEP 608.01(n)(A), and respectfully request that the improper objection under 37 C.F.R. § 1.75(c) be withdrawn.

On pages 3 of the Office Action, claim 18 stands rejected under 35 U.S.C. § 112, second paragraph, as allegedly being indefinite. Specifically, the Office Action is unclear as the relative disposition of the claimed “semiconductor film” with regard to the source and drain regions, and the relative dispositions of the claimed “semiconductor film” and “gate electrode.” Accordingly, Applicants have amended independent claim 18 to recite, in part, “forming a first liquid-repellent region by a plasma treatment on a surface for forming a gate electrode in an upper portion of the semiconductor film” and “forming the gate electrode in

the first lyophilic region of the surface of the semiconductor film by dropping a composition including a conductive material.” Accordingly, Applicants respectfully assert that independent claim 18, as amended, clearly establishes the relative dispositions of the claimed “semiconductor film” and “gate electrode,” and thus, particularly points out and distinctly claims the subject matter which Applicants regard as the invention. Applicants respectfully request that the rejection of claim 18 under 35 U.S.C. § 112, second paragraph, be withdrawn.

On pages 3 to 7 of the Office Action, claims 1-3, 5-9, 11-15, 21, 23-26, and 29-35 stand rejected under 35 U.S.C. § 102(b) as allegedly being anticipated by Hashimoto et al. (US 2003/0083203). In addition, on pages 9 to 10 of the Office Action, claim 4 stands rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Hashimoto et al. Applicants respectfully traverse these rejections for at least the following reasons.

Initially, Applicants respectfully request the status of independent claim 26. Specifically, although the heading of the rejection of claims under 35 U.S.C. § 102(b) identifies claim 26 as being rejected, the body of the rejection fails to explicitly address the combination of features recited by independent claim 26. Accordingly, Applicants respectfully request fair and proper consideration of all pending claims, including unexamined independent claim 26, in the next non-Final Office Action.

Independent claim 1, as amended, recites a method for forming a wiring including steps of “performing selectively a lyophilic treatment on a region of the surface to form a lyophilic region and a liquid-repellent region” and “forming a wiring on the lyophilic region by dropping a composition including a conductive material.” Similarly, independent claims 2, 3, and 9 each recite a method for forming a wiring including steps of “forming selectively a lyophilic region in the liquid-repellent region so that the surface includes the lyophilic region and the liquid-repellent region” and “forming the wiring on the lyophilic region by dropping a composition including a conductive material.”

Independent claim 14, as amended, recites a method for manufacturing a thin film transistor including, in part, steps of “performing selectively a lyophilic treatment on a region of the surface to form a first lyophilic region so that the surface includes the first lyophilic region and the first liquid-repellent region” and “forming a conductive film on the first lyophilic region by dropping a composition including a conductive material.” Likewise,

independent claim 15, as amended, recites a method for manufacturing a thin film transistor including, in part, steps of “forming selectively a first lyophilic region in the first liquid-repellent region so that the surface includes the first lyophilic region and the first liquid-repellent region” and “forming a conductive film on the first lyophilic region by dropping a composition including a conductive material.” Moreover, independent claim 25, as amended, recites a method for manufacturing a thin film transistor including, in part, steps of “forming selectively a first lyophilic region in the film containing fluorine so that the film containing fluorine includes the first lyophilic region and a liquid-repellent region” and “forming a gate electrode on the first lyophilic region by dropping a composition including a conductive material.”

Independent claim 31 recites a droplet discharge method including steps of “forming a lyophilic region by irradiating selectively an object to be treated in which a liquid-repellent region is formed with light by a light irradiation unit so that the object to be treated includes the lyophilic region and the liquid-repellent region” and “discharging a droplet onto the lyophilic region by a droplet discharging unit, in a treatment chamber including the droplet discharging unit and the light irradiation unit.” Likewise, independent claim 32 recites a droplet discharge method including, in part, steps of “forming selectively a lyophilic region in the object to be treated in which a liquid-repellent region is formed by the light irradiation unit in the second treatment chamber so that the object to be treated includes the lyophilic region and the liquid-repellent region” and “discharging a droplet onto the lyophilic region by the droplet discharging unit.”

In direct contrast to Applicants’ claimed invention, as detailed above, Hashimoto et al. merely discloses, in paragraph [0087], an exemplary surface treatment for controlling liquid-repellent properties of a substrate surface for formation of a wiring by forming predetermined contact angles of 60 degrees or more, preferably 90 degrees or more, but 110 degrees or less with respect to a liquid containing conductive particles. Hashimoto et al. provides several different methods to accomplish these predetermined contact angles including, as set forth in paragraph [0100], for example, making the substrate surface lyophilic by irradiation of ultraviolet light and by exposing the substrate to an atmosphere of ozone. According to Hashimoto et al., the entire surface of the substrate is treated to make the entire substrate surface lyophilic. Thus, Applicants respectfully assert that Hashimoto et

al. fails to teach or suggest a surface having both a lyophilic region and a liquid-repellent region, wherein a wiring is formed on the lyophilic region.

For at least the reasons set forth above, Applicants respectfully assert that Hashimoto et al. fails to teach or suggest the combination of features recited by at least independent claims 1-3, 9, 14, 15, 25, 31, and 32, and hence dependent claims 4-8, 10-13, 21-24, 27-30, and 33-35. Thus, Applicants respectfully request that the rejections under 35 U.S.C. §§ 102(b) and 103(a) in view of Hashimoto et al. be withdrawn.

On pages 7 to 8 of the Office Action, claims 18, 22, and 28 stand rejected under 35 U.S.C. § 102(e) as allegedly being anticipated by Kobayashi (US 2005/0040759). Applicants respectfully traverse this rejection for at least the following reasons.

In the Office Action, the pixel electrode 111 of Kobayashi is equated to Applicants' claimed "gate electrode." Specifically, the Office Action alleges that Kobayashi teaches steps "forming a liquid-repellent region by performing a plasma treatment on a surface for forming a gate electrode 111 in an upper portion of the semiconductor film (figure 7; [0091])," "forming selectively a lyophilic region in the liquid-repellent region [0096]," and "forming the gate electrode 111 in the lyophilic region of the surface of the gate electrode by dropping a composition including a conductive material [0118])." Applicants respectfully disagree.

As clearly disclosed and shown by Kobayashi, in FIG. 4, for example, the gate electrode 143 is not electrically connected to the pixel electrode 111. In addition, the gate insulating film 142 is completely disconnected from and unrelated to the second interlayer insulating film 144b. Moreover, Kobayashi explicitly discloses, in paragraph [0110], that the electrode surfaces 111a of the pixel electrodes 111 and wall surfaces of the openings 112d and top surfaces 112f of the bank layers 112 are given lyophilic treatment. Then, as disclosed in paragraph [0117] of Kobayashi, the wall surfaces of the openings 112d and top surfaces 112f of the bank layers 112 are subjected to the liquid-repellency treatment. Accordingly, Applicants respectfully assert that Kobayashi is completely silent with regard to *anything* directed towards steps of "forming a first liquid-repellent region by a plasma treatment on a surface for forming a gate electrode in an upper portion of the semiconductor film" and "forming the gate electrode in the first lyophilic region of the surface of the semiconductor film by dropping a composition including a conductive material," as required by independent

claim 18.

For at least the reasons set forth above, Applicants respectfully assert that Kobayashi fails to teach or suggest the combination of features recited by at least independent claim 18, and hence dependent claims 21-24. Thus, Applicants respectfully request that the rejection under 35 U.S.C. § 102(e) in view of Kobayashi be withdrawn.

In view of the foregoing, Applicants respectfully request that the prior art rejections of record be reconsidered and withdrawn by the Examiner, that all pending claims be indicated as allowable, and that the application be passed to issue.

If a conference would expedite prosecution of the instant application, the Examiner is hereby invited to telephone the undersigned to arrange such a conference.

Respectfully submitted,
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